

REMARKS-General

1. The newly drafted independent claims 37 and 44 incorporate all structural limitations of the original claims 1 and 14 and include further limitations previously brought forth in the disclosure. No new matter has been included. All new claims 37-50 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

Response to Rejection of Claims 14, 15, 23-25, 29, 30 and 35 under Obviousness Double Patenting

2. The applicant submits a terminal disclaimer herewith, in compliance with 37CFR1.321(c), to disclaim the terminal part of the statutory term of any patent granted on instant application which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 to 156 and 173, as presently shortened by any terminal disclaimer, of copending Application No. 10/400,143, in order to overcome the rejection of the claims 14, 15, 23-25, 29, 30, and 35 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 21-40 of the copending Application No. 10/400,143.

Regarding to Rejection of Claims 14, 15, 23-25, 29, 30, and 35 under 35USC102

3. The Examiner rejected claims 14, 15, 23-25, 29, 30, and 35 as being anticipated by Luo (US 6,220,853).

4. The Luo patent is an application for patent invented by the same inventor, Luo, of the instant invention. The applicant respectfully submits the differences of the distinctive feature between Luo and the instant invention as follows:

(a) In claim 44, "the wheel axle has a diameter substantially **smaller** than that of the central axial hole of the striker wheel such that the striker wheel is normally free rotated with respect to the driving units", wherein Luo has no such suggestion.

(b) In claim 44, "a free rotating driving cap and a fixed driving cap" is claimed, wherein Luo merely teaches two free rotating driving caps.

(c) Luo does not teach “the free rotating driving cap and the fixed driving cap create a rotational differentiation with respect to the striker wheel” is claimed for enhancing a childproof feature of the disposable childproof lighter as claimed in 44.

(d) Luo fails to anticipate “the driving cap has an outer circumferential slipping surface” as claimed in claim 44, wherein Luo merely teaches a knurling surface is provided on an outer circumferential surface of each of the driving caps.

(e) Luo does not teach “a thickness of the driving ring is gradually reduced from a mid-portion to two outer edges thereof to form the round slipping surface of the driving cap, so as to maximize a distance between the mid-portion of each of the driving caps and the outer circumferential surface of the striker wheel” as claimed in claim 41.

5. Accordingly, applicants believe that Lu does not anticipate the instant invention and the rejection of claims should be withdrawn.

Response to Rejection of Claims 1-13, 16-22, 26-28, 31-34, and 36 under 35USC103

6. The Examiner rejected claims 1-13, 16-22, 26-28, 31-34, and 36 over Luo in view of Sher (US 5,769,625) and Fisher (20030108836).

7. Pursuant to 35 U.S.C. 103: “(a) A patent may not be obtained thought the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

8. In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

9. In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and Luo which is qualified as prior art of the instant invention under 35USC102(b) are obvious in view of Sher and/or Fisher at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

10. The applicant respectfully submits that in order to determine whether the differences between the subject matters sought to be patent as a whole of the instant invention and the primary prior art, Luo, are obvious in view of the supplemental cited arts, Sher and/or Fisher, we have to identify all the differences between the claims of the instant inventions and Luo. Therefore, the difference between Luo and the instant invention as claimed in claims 37 to 50 is not limited to the disclosure of "free rotating driving cap", but includes the above distinctive features (a) to (e).

11. The applicant further identifies the differences between the claims of the instant invention and Luo as follows:

(f) In claim 37, "a free rotating driving cap and a fixed driving cap" is claimed, wherein Luo merely teaches two free rotating driving caps.

(g) In claim 37, "the free rotating driving cap and the fixed driving cap create a rotational differentiation with respect to the striker wheel" is claimed for enhancing a childproof feature of the disposable childproof lighter, wherein Luo does not have such suggestion.

(h) In claim 37, "each of the driving rings has a smooth outer circumferential slipping surface" is claimed, wherein Luo merely teaches a knurling surface is provided on an outer circumferential surface of each of the driving caps.

(i) Luo does not teach "a thickness of the driving ring is gradually reduced from a mid-portion to two outer edges thereof to form the round slipping surface of the driving cap, so as to maximize a distance between the mid-portion of each of the driving caps and the outer circumferential surface of the striker wheel" as claimed in claim 37.

(j) Luo does not teach "the driving teeth and the driven gear teeth" as claimed in claims 38 and 42 in addition to what is claimed in claim 37 as a whole.

(k) Luo does not teach “a second set of driving teeth and a second set of driven gear teeth” as claimed in claim 39 in addition to what is claimed in claim 37 as a whole.

(l) Luo does not teach “the inner circumferential surface of the fixed driving cap is normally and frictionally engaged with the outer circumferential surface of the striker driving wheel of the respective driven gear element” as claimed in claims 40 and 43 in addition to what is claimed in claim 37 as a whole.

(m) Luo does not teach “the free rotating driving cap is normally rotated about the respective driven gear element in a free rotatably movable manner” as claimed in claim 41 in addition to what is claimed in claim 37 as a whole.

(n) Luo does not teach “the driving teeth and the driven gear teeth” as claimed in claim 45 in addition to what is claimed in claim 44 as a whole.

(o) Luo does not teach “a second set of driving teeth and a second driven gear teeth” as claimed in claim 46 in addition to what is claimed in claim 44 as a whole.

(p) Luo does not teach “the inner circumferential surface of the fixed driving cap is normally and frictionally engaged with the outer circumferential surface of the striker driving wheel of the respective driven gear element” as claimed in claim 47 in addition to what is claimed in claim 44 as a whole.

(q) Luo itself never mention of any “wheel axles is integrally and coaxially extended from an inner side of the respective driving ring to form the driving unit in a one-piece integral manner” as claimed in claims 48 to 50 in addition to what is claimed in claim 44 as a whole.

12. The applicant respectfully submits that the slipping surface of the driving cap providing the structural features of (i) limiting the friction between the driving cap and the thumb of the adult for providing child resistance; (ii) maximizing the distance between mid-portion of the driving cap and the outer circumferential surface of the striker wheel; and (iii) enhancing the contacting area between the thumb surface and the driving cap. Accordingly, in order to ignite the disposable childproof lighter of the instant invention, the thumb of the adult must press on the driving caps to deform the thumb surface

thereon. The ring-shaped driving caps not only enhance the contacting area between the thumb surface and the driving cap to establish sufficient gripping friction but also prevent the thumb surface from contacting the striker wheel. However, Sher merely teaches the annular unrecessed lateral portions 722 are **flat smooth surface**. Even the flat smooth surface taught by Sher can limit the friction thereon, the flat smooth surface is not equivalent to the round slipping surface of the driving cap to achieve the objectives of enhancing the contacting area and maximizing the distance from the striker wheel. Therefore, the flat smooth surface in Sher should not be considered as the identical purpose of the round slipping surface of the instant invention.

13. Furthermore, Fisher merely teaches a lighter having a fixed driver disk and a free spinning third disk, having a diameter larger than a diameter of the driver disk, overlappedly disposed on the driver disk. However, the third disk functions as a barrier to block the driver disk from being directly contacted with the finger of the user. It is apparent that Fisher fails to teach the same recitation and limitation of the instant invention of using the driving cap to engage with the striker driving wheel to drive the striker wheel to rotate. In other words, Fisher never mentions any concept of engaging the third disk with the driving disk to drive the spark disk to rotate such that the ignition of Fisher's lighter is totally different from the instant invention.

14. The Examiner alleges the limitation of having the fixed driving cap normally engaged with the gear wheel is considered to be the obvious structural equivalent of a driving cap structure for turning the striker wheel that does not include the child safety feature. The applicant respectfully submits the claimed invention must be considered as a whole. The instant invention provides a fixed driving cap and a free rotating driving cap to engage with the striker driving wheels respectively so as to drive the striker wheel to rotate, wherein each of the driving caps has a round slipping surface. The free rotating driving cap and the fixed driving cap create a rotational differentiation with respect to the striker wheel for enhancing a childproof feature of the disposable childproof lighter of the instant invention as the unexpected result of using the fixed driving cap and the free rotating driving cap. In other words, when a downward force is applied on the driving caps by the adult, the free rotating driving cap must be pressed harder than the fixed driving cap to keep the engagement between the free rotating cap and the striker driving wheel. Therefore, the downward force will be unevenly applied on the fixed driving cap and the free rotating driving cap, i.e. the uneven pressing

manipulation of the driving caps. Having the round slipping surface, the driving caps must be intentionally manipulated by the thumb of the adult for ignition. Accordingly, the instant invention clearly teaches "children under five years old are not strong enough to press down the driving caps to generate friction between the driving caps and the driven gear elements or to maintain the engagement between the driving teeth and driven gear teeth while turning the driving caps. However, an adult can easily **press and turn** the driving caps to finish the ignition operation." In other words, neither Luo, Sher nor Fisher suggests an ignition system of providing a childproof feature containing the above distinctive features (a) to (q) as claimed in the instant invention as well as any combination or possibility of using a fixed driving cap and a free rotating driving cap with round slipping surface for creating a rotational differentiation with respect to the striker wheel and maximizing the distance between the mid-portion of each of the driving caps and the outer circumferential surface of the striker wheel.

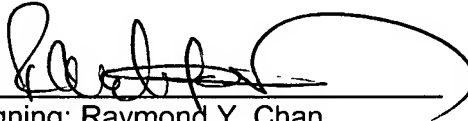
15. "To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited art references for combination in the manner claimed... [T]he suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness..." *In re Gorman*, 933 F.2d 982, 986, 18 USPQ 2d 1885, 1888 (Fed. Cir. 1991).

16. Accordingly, the applicant believes that neither Luo, Sher nor Fisher, separately or in combination, suggest or make any mention whatsoever of the difference subject features (a) to (q) as claimed in the amended claims 37 to 50 of the instant invention.

17. The applicant respectfully submits that the instant invention is an improvement of his own patent (Luo) with improved childproof features in order to protect the competitors to copy the concept and make two driving caps in two different rotational manners and each of the driving caps has a smooth slipping surface as claimed in the instant invention for preventing the lighter from being ignited accidentally or by children.

I hereby certify that this corresponding is being deposited with the United States Postal Service by First Class Mail, with sufficient postage, in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" on the date below.

Date: 02/16/2006

Signature: 
Person Signing: Raymond Y. Chan